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ABSTRACT

"Preparedness for the Future as an Educational Objective" is the name of a research and development project in progress at the Malmo School of Education (Sweden). The project's main tasks are to: (1) inventory previous research and activities; (2) study pupils' ideas about the future; (3) collect and analyze viewpoints from various school observers regarding current shortcomings in school preparation for the future and recommendations for improvement; (4) make specific studies of the ways in which questions relating to the future are and can be treated in schools; and (5) compile discussion material and catalogs of ideas for teachers and teacher trainers. Accomplishments to date in each of these areas are discussed in the project summary. Project publications which provide further detail are listed. The last part of this publication presents some illustrative transcripts of five interviews with experts which were conducted as part of the project. (RM)

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**FUTURE CONSCIOUSNESS
AND THE SCHOOL**

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"Preparedness for the future as an educational objective" is the working heading of a research and development project at the Malmö School of Education. Some of the important tasks of the project are the following: (1) To inventory previous research and other activities relating to the subject of "preparedness for the future as an educational objective"; (2) to study pupils' ideas about the future; (3) to collect and analyze viewpoints from various school observers regarding current shortcomings in school preparation for the future together with recommendations concerning possible improvements; (4) to explore ways in which questions relating to the future are treated and can be treated in schools; and (5) against the background of materials from points (1)-(4) to compile discussion material and catalogues of ideas for teachers and teacher trainers.

This book gives a summary of the general structure of the project, lists the publications available from the project, and presents some illustrative expert interviews.

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Contents

	Page
PREPAREDNESS FOR THE FUTURE AS AN EDUCATIONAL OBJECTIVE: OVERVIEW OF A PROJECT	3
List of Publications	25
ILLUSTRATIVE EXPERT INTERVIEWS	33
Christopher J. Dede	35
Ervin Laszlo	51
Saul H. Mendlovitz	59
Allan L. Peakes	69
Mary Alice White	81

**PREPAREDNESS FOR THE FUTURE
AS AN EDUCATIONAL OBJECTIVE:
OVERVIEW OF A PROJECT**

"Preparedness for the future as an educational objective" is the working heading of a research and development project in progress at the Malmö School of Education. The following is a short summary of the general structure of the project. For further details, readers are referred to a number of reports listed at the end of this description.

Why a project on "preparedness for the future"?

We can start by saying that a great deal of normal school activities are by nature concerned with a kind of preparation for the future. The knowledge, skills and behaviour which we develop at school later serve the pupils as practical preparedness in their capacities of citizens and workers. In recent years, however, it has been remarked in several quarters that more should be done, that more deliberate and systematic efforts should be made to prepare pupils for the future. This can be done in many different ways, e.g. directly by means of information about the future on those points where there are certain lines of development which we can explain, but also perhaps above all indirectly, through a more deliberate focus on particular skills which it can be an advantage to possess in any type of future.

But how is this to be done? What are the main deficiencies today in the preparations made by schools for the future? What is it that ought to be done differently? We seem quite simply to know too little about this, and this was one of our initial premisses. We felt that research and development work was needed, we initiated a project, and we are glad that the National Board of Education has been willing to give it financial support.

Main tasks

Some of the important tasks of the project are as follows:

- (1) To inventory previous research and other activities relating to the subject of "preparedness for the future as an educational objective".

- (2) To study pupils' ideas about the future.
- (3) To collect and analyze viewpoints from various school observers regarding current shortcomings in school preparation for the future, together with recommendations concerning improvement which schools could make.
- (4) To make specific studies of the ways in which questions relating to the future are treated and can be treated in schools.
- (5) Against the background of material from points (1)-(4), to compile discussion material and catalogues of ideas for teachers and teacher trainers.

These five tasks are to some extent being tackled concurrently in the course of the project, but it was only natural for attention to be concentrated during an initial phase on the first two; the remaining three have been allotted more scope in the later phase of the project, which is now in progress.

This is an extremely large problem area. As a researcher one prefers to have a manageable problem, and this one may seem somewhat unwieldy. The variety of approaches and tasks is almost infinite. Clearly, we cannot conclusively solve the many problems of this field in a single project. But we hope at least to be able to increase our knowledge of the field somewhat, to heighten awareness of these matters on the part of some of the people concerned, and to help encourage a debate and further activities relating to the subject of preparedness for the future.

The concept of "preparedness for the future"

One of the central issues of the project, of course, is: What is the real meaning of the general objective expressed by the term preparedness for the future?

When describing our project in various contexts, we have sometimes been criticized for choosing the term preparedness for the future. One point of criticism has been that this term may seem to presuppose our thinking in terms of a very definite future for which we are preparing ourselves, and that this is an absurd premiss and entails an undesirable inflexibility. We usually replied that it is possible to

interpret the term in this way, in which case it does not work well for those who attach such a meaning to it. But we ourselves do not interpret it in this way. An important question for us instead is how schools are to be able to prepare pupils for a future which in vital respects is uncertain and changeable. When we are particularly anxious to prevent an interpretation in terms of a static future image, we sometimes use the phrase "being prepared to meet and shape the future", and we attach a great deal of importance to the second part of this phrase - shaping the future.

Since the concept of preparedness for the future is so comprehensive and complex, it is natural to discuss various ways of dividing up the goal area into more specific sub-objectives or components. The sub-studies included in the project ought in various ways to be able to contribute towards the formulation of a list of partial objectives. I will content myself here with suggesting a number of conceivable components as a basis for further discussion.

Some conceivable goal components

Here is a series of examples of conceivable goal formulations which can be grouped into the following five categories.

1. Knowledge of the probable

being aware of current trends of change in vital areas ("probable futures"),

viewing these changes in an integral perspective, for example by means of an ecological and global approach, being able to assess "probable consequences" of both action and inaction.

2. Flexibility, abundance of ideas concerning the possible

being capable of imagining many alternative possibilities ("possible futures", "alternative futures") and of creatively developing alternative ideas concerning solutions to present and future problems.

3. Relation to fundamental values

having a conscious point of departure in fundamental values

(What sort of life and what sort of society do I want to aim for? What do I regard as quality of life?), being able to view both probable development and various alternative possibilities in relation to values, so as to be able to select "desired futures".

4. Preparedness to act, self-reliance, solidarity

in spite of a realization of present and future problems, preserving a "will to action nevertheless" and trying to realize the desirable ("start towards realized futures"), possessing a basic psychological security which makes it possible both to be amenable to change and to oppose the undesirable,

having a wide range of solidarity: feeling responsible for the more long-term effects of actions, feeling that things outside one's immediate circle may also be remediable.

5. Retrieval capacity and integration of involvement/critical evaluation

being capable of acquiring the knowledge and implements needed for realization ("on route towards realized futures"),

being capable of allowing one's involvement to be governed by knowledge through a close interconnection of basic values and a critical search for knowledge ("evaluation of heading for the goal").

Without discussing these examples of goal formulations any further, we may note that they cover a very large and wide range of objectives with a great deal of importance attached to general cognitive skills, attitudes and values. Several of them describe "ideals" which are not very easy to attain, though it can be useful to discuss the extent to which and the ways in which they can be approached with the aid of schools.

What are the starting points?

Nearly all educational work can be described in response to three main questions: Where do we want to get? What are our starting points? What is our best way of getting from start to finish? We have now made a number of introductory remarks concerning conceivable goals in the field of preparedness for the future. Another important question concerns the present state of things in Swedish schools. What are our starting points?

Questions of this kind are reasonable to ask, but of course very difficult to answer. We are interested here both in the ideas which pupils in Swedish schools entertain concerning the future and in the nature of the influence currently exerted by schools. If we can arrive at a reasonable description of sub-goals, resembling that reproduced above, the question can also be phrased as follows: Which of these sub-goals can be considered - for example, by the various parties concerned - to be most in need of improved pedagogical inputs? Or again: Concerning which of these sub-goals do we have the best chances of making a better contribution in the school context? After all, school opportunities regarding some of these sub-goals are probably extremely limited.

As regards the pupils' ideas concerning the future, we are interested among other things in the extent to which they are optimistic or pessimistic, how differentiated they are, the scope in time and space of the most frequent images of the future, and - not least - the extent to which the pupils feel like active protagonists in or rather like passive victims of their imagined future. To quote a terminology which we sometimes use in these contexts, what is the "actionable range" of different pupils? Do they feel able to play an active part and exert influence to a great or little extent?

Where all such questions are concerned, one must of course be prepared for differences between different groups

of pupils (e.g. between different ages), just as between individuals. But how great are the differences and what is the typical picture at different school levels?

Various ways of collecting information

Various kinds of information are being collected to improve our knowledge of the problem field to which the project refers and in order to prepare better documentation on which to base recommendations. A few examples of different procedures will be given here, grouped with reference to four of the main project tasks mentioned above: (1) survey of literature, (2) studies of pupils' ideas concerning the future, (3) canvassing of viewpoints from various categories of school observer, (4) studies of the way in which questions concerning the future are treated and can be treated in practical schoolwork.

Task 1: Inventory and analysis of literature

The inventory of relevant literature is an important task of this project and will involve a close analysis of selected documents which are particularly interesting for the purposes of the project. Three main types of material will be considered: (a) documents focussing on probable and desired futures; (b) studies of ideas concerning the future; (c) teaching materials dealing with questions relating to the future and educational surveys dealing with the subject of preparedness for the future.

Literature of the first type is abundantly available, and it will only be possible to study isolated specimens. As regards studies of "probable futures", one task may be to try to identify a number of "presumed trends" and link them to "type of preparedness for the future", basically as shown by the following illustrative pattern.

Presumed trends

Type of "preparedness for the future"

Information explosion
Rapidly increased
density of interaction
in a more heterogeneous
society

Capacity for sifting information
Tolerance of variation, flexibility

Drastic resource
allocation problems

Global responsibility, long-term
perspective

Discussions of "desired futures" are an important complement to studies of "probable futures". A great deal of debate literature has been published on this subject in recent years. Some of these books can be used directly in school to encourage the discussion of questions and conflicts of values. Some of the works in this category have also prompted a considerable amount of debate in our mass media, so that the simultaneous study of basic publication and follow-up discussion may be particularly rewarding for educational purposes. A Swedish example is provided by the debate concerning "Hur mycket är lagom?" /How much is just right?/ (by G. Eickstrand and L. Ingelstam), while as a Danish example we have the book "Oprør fra midten" /Rebellion from the Centre/ (by N.I. Meyer, K.H. Petersen and V. Sørensen), which was unusually popular for a work of social analysis.

Studies of ideas concerning the future are of course directly germane to our project, but they are comparatively rare in literature. One major project in this field is the transnational "Images of the world in the year 2000". This and another multinational project have been dealt with in the course of our own project in a small publication by A.-L. Tvingstedt (1978).

Teaching materials on questions for the future and educational surveys or discussions relating to the subject of preparedness for the future are also closely relevant to our project. Works of these kinds are not particularly common, although interest in courses and course material

focussing on the future appears to have grown in recent years. The project team have endeavoured, partly via the World Future Society, which has a special educational section, to improve their knowledge concerning less readily available literature and current activities within this field in other countries.

In addition to undertaking our own analysis of literature, we also want to collate relevant literature in bibliographical synopses which can make it easier for others to find their way in this heterogeneous field of literature.

Task 2: Studies of pupils' ideas concerning the future

When it comes to plotting current ideas about the future, the pupils themselves are our source of information. We are trying various methods here: essays, interviews, questionnaires and various test techniques.

Among other things, two types of essay material have been used: one with a minimum of control (free essays on the subject of "the future"), and one with a more specific initial stimulus (the essay writers are given access to certain texts and are able to choose between various subjects).

One of the purposes of pupil interviews is to obtain variegated material in which it is possible to follow up individual answers. Within the project we have primarily interviewed students from the terminal grade of upper secondary school: students who were about to leave school and ought therefore to be in a position to sum up their opinions of school (cf. Ahlin & Kamiński, 1980).

Interviews require a great deal of work input and therefore have to be confined to a limited material. To facilitate certain comparisons of larger groups, we are supplementing the interviews by means of written questionnaires. Some of the results from one of our preparatory studies have been reported by Tvingstedt (1979). A more comprehensive questionnaire survey, involving some 3.500 pupils, has since been conducted. This includes a total survey of terminal grade students in all lines of Malmö upper

secondary schools, together with supplementary reference groups from grades 9 and 6.

In addition to essays, interviews and questionnaires, more specialized testing techniques (free associations, sentence completion, semantic differentials etc.; cf. Daras-Olsson, 1980) have been tested. Drawings and group interviews have also been used.

Task 3: Canvassing of viewpoints from various school observer categories concerning schools and preparation for the future

Close-up view

As has already been indicated, the pupil interviews, like the pupil questionnaires, dealt with the pupils' opinions concerning school and preparation for the future, as well as the pupils' ideas concerning the future itself. Do the pupils feel that schools at present are preparing them adequately for the future? And above all, perhaps, in what ways do they feel that schools could prepare them more adequately for the future?

Viewpoints were collected from grades 5 and 8 of compulsory school and grades 1, 2 and 3 of upper secondary school in a preparatory questionnaire study (Tvingstedt, 1979). Among other things this involves studying answers to the general question: "How do you feel that school has prepared you for the future?" Most of the positive replies were found to come from pupils in the most junior grade. There was a clear predominance of negative answers in all the other grades.

It is natural for viewpoints also to be canvassed from other observers of present-day Swedish schools besides the pupils themselves - above all from teachers. Experience gained from an initial interview study of a group of upper secondary school-teachers has been summarized by Hansson (1979). Here, briefly, are some examples of viewpoints contributed by this group.

Most observers felt that both compulsory school pupils and upper secondary school students were poorly prepared

for the future, taking the term preparedness in its broader sense. On the other hand, many of the upper secondary school students were considered relatively well prepared for their personal, occupational future. Shortcomings referred to by many observers included the fragmentation of schoolwork into subjects, subject items and lessons, and its division between many teachers. This fragmentation was felt to impair the pupils' chances of obtaining a coherent, comprehensive picture of work in school and in society at large. It was also remarked that the pupils were excessively "mollycoddled", that they had too few opportunities of acting on their own in responsibility. There was fairly widespread agreement that schools could do more to provide adequate preparation for the future, and there was also a general consensus that this would probably mean more future-oriented subject items as well as a more deliberate focus on attitudes and skills preeminently constituting preparation for the future.

In addition to teachers, interview studies in the course of the project also involve other school-related groups, e.g. trainee teachers (Ekstrand, 1981a), teacher trainers (Rudvall & the Project "Preparedness for the Future", 1980; Ekstrand, 1981b) and persons with experience of committee investigation on the upper secondary school (Nilsson & the Project "Preparedness for the Future", 1981; Wallentin, Frostensson & the Project "Preparedness for the Future", 1981).

Long-distance view

The project team, however, have considered it insufficient to address themselves to persons with this kind of close-up view of school (pupils, teachers and other members of the school community). To widen the range of viewpoints, questions concerning the ability of schools to prepare pupils in various ways for an uncertain and changeable future have been addressed to a number of prominent sectoral experts (e.g. persons with research experience in various fields), social debaters and school policy-makers. One of the aims

in selecting respondents has been to obtain a variegated sample and also if possible to include a number of persons who in various ways have already had occasion to deal with future perspectives.

The procedure was as follows.

1. The persons selected were first supplied by post with a number of "items of conversation" to form the skeleton of an interview. Questions included the following. "What is the first thing that comes into your mind when you hear the words preparedness for the future? Looking back on your own school days, do you feel that school then made you and your friends well equipped to meet and shape the future? Do you believe that schools could do more to make pupils well equipped to meet and shape the future? What are some of the steps and measures that you think of first?"
2. The interviews were conducted by Christer Bjurwill and tape-recorded. The pre-distributed main questions were then supplemented with free follow-up questions.
3. An initial interview transcript was prepared in due course by secretaries. The interviewer (CB) and the project leader (AB) then slightly adapted the transcript to produce a text which was readable and slightly abridged.
4. The adapted transcripts were sent to the interviewees for a final check (corrections, elucidations etc.) and to be approved for reproduction.

The reviewed and approved transcripts now constitute the "official basic version" of the project and can be used by us for direct publication and for analytical summaries of various kinds. A series of booklets containing full-length versions of the interviews has been published (cf. Fagerberg, Jersild & the Project "Preparedness for the Future", 1979).

Many people found the full-length version booklets, successively published between 1979 and 1981, interesting reading, and it therefore seemed appropriate to publish some more comprehensive collections as well. One of these contains interviews of 12 persons:

Gunnar Adler-Karlsson	Professor of political science
Johan Asplund	Professor of social psychology
Tor Ragnar Gerholm	Professor of physics
Ake Gustafsson	Professor of genetics
Ingemar Hedenius	Professor of practical philosophy
Torsten Husén	Professor of education
Torsten Hägerstrand	Professor of ethnogeography
Lars Ingelstam	Professor of technology and social change

David Ingvar

Professor of clinical
neurophysiology

Birgitta Odén

Professor of history

Sten Samuelson

Professor of architecture

Håkan Wiberg

Professor of sociology

One thing which all the interviewees in this group had in common was that they were professors of various university subjects (Bjerstedt & Bjurwill, 1981a); other collections focused on slightly different groups (Bjerstedt & Bjurwill, 1981b and c). In addition to these full-length presentations, a number of summarizing analyses have also been issued (e.g. Bjurwill, 1981a and b).

To broaden our perspective still further and in order to utilize the special experience already gained in some quarters outside Sweden, a number of researchers and future-minded educationalists were also interviewed in England and the United States, partly in connection with conferences arranged by the World Future Society. Some of these interviews have been published in full-length versions examined by the interviewees. This applies, for example, to talks with Christopher Dede (Founding President of the educational section of the World Future Society, one of the founders and directors of a well-known futures study programme at university level in Texas), Allan L. Peakes (in charge of the futures study programme at what is probably a unique school, focussing entirely on future-oriented studies) and Mary Alice White (Professor at Teachers College, New York, leader of a special course entitled "Schooling for the Future" and author of "The Land of the Possible").

Task 4: Studies of the way in which questions concerning the future are treated and can be treated in schools

As a result of the activities described in the preceding section, the project can among other things be said to be collecting opinions concerning things which schools could do better. In our continuing work it will be interesting to test some of these opinions in practical schoolwork, to make specific studies of the way in which questions concerning the future are treated in school

teaching, how they can be treated, what the difficulties are and so on. Since these things are included in the project activities now in progress, all we can do here is give a brief indication of our interests.

During the spring of 1980, Sweden held a referendum on nuclear power in which many upper secondary school students were entitled to vote. The referendum concerned a vital question for the future, and one with wide-ranging implications extending far ahead in time. This seemed a propitious occasion on which to study the extent to which and the way in which schools included such questions in their teaching, the prominence given to future perspectives, and the way in which controversial questions concerning values were handled in this connection. Immediately after the referendum, therefore, the project team carried out a study of these questions, mainly by interviewing teachers and students (Ankarstrand-Lindström & Nilsson, 1980).

Teachers and others often referred when interviewed to the need for special teaching materials for future-oriented instruction. There are not many such textbooks in Swedish, but one of the few is the recently published "Människan och framtiden"/Man and the Future/, containing suggestions for group work on future issues and quality of life, the practical planning of a residential area and role play in this connection. Lena-Pia Lindholm has tested this material in a number of classes on behalf of the project, using tape-recordings, pupil questionnaires, essays, interviews of teachers and written reports from teachers on the progress of work (Lindholm & Ekstrand, 1982).

The project team has established a small liaison group of upper secondary school teachers in various subject fields to discuss opportunities of introducing more elements of preparation for the future in regular teaching. School experiments of various kinds, closely geared to the discussions of the liaison group, give the project team an opportunity, in consultation with the teachers, of planning special teaching series and following them up,

for example, with interviews and questionnaires. Questions concerning peace play a central part in some of these experiments. This work, which is now in progress and can partly be said to comprise exploratory case studies, is being led by Gunnel Ankarstrand-Lindström.

As an end product of the project, and on the basis of all the material collected in connection with the four tasks described above, we hope to be able to compile discussion material or catalogues of ideas for teachers, teacher trainers and others. The project team has already been alive to the need for discussion materials in certain parts of its publishing activities. The collections of interviews published (Bjerstedt & Bjurwill, 1981 a-c), for example, should be able to serve as documentation of this kind, and the summaries of interviews of Swedish experts and social debaters (Bjurwill, 1981 a-f) have been presented with the express aim of forming a basis for discussion (with points of discussion inserted).

Paving the way to our destination: Some concluding remarks

Earlier we mentioned the three questions concerning the objective, the starting points and the route from start to finish. This project is aimed in various ways at increasing our knowledge in all three fields of enquiry. The third question is perhaps particularly interesting to teachers: What are the appropriate ways of reaching or approaching the goals? Or, putting the question directly in the terms of the project: In what various ways can we improve the ability of schools to prepare their pupils for the future?

It should also have been made clear by now that the project is aimed at helping to answer this third question in three different ways: by collecting information on international experience within the field, by studying assessments made in Sweden by people with experience of present-day schools and various expert fields, and by means of specific practical experiments in schools.

It is probable that completely different types of school inputs should be recommended for different parts of the catalogue of objectives. Possible examples of such

inputs are as follows: (a) "future orientation" (information on current trends of change and their conceivable consequences if allowed to continue "undisturbed"), (b) "training of skills" (e.f. training to procure and sift knowledge, among other things to understand the techniques used in futures studies; training in the production of ideas; training in the elucidation of values) and (c) "construction of attitudes and values" (establishment of motivation for active preparedness and for a wider range of solidarity).

Techniques which may be useful include the following: (a) information reading and information processing (for example, of abbreviated presentations of reports from futures studies), (b) experiential reading (for example, of science fiction focussing on the consequences of innovations), (c) argumentative and empathic training (via role play and simulation in planning and decision-making situations of a future character) and (d) participation training (close contacts with working life and politics in the local community).

It is too early yet to say what the final recommendations will look like, but we can roughly outline some general viewpoints which have often emerged in the course of our work so far.

Certain key concepts or themes recur again and again in our discussions concerning the future and preparedness for the future. Key concepts of this kind include, for example, (1) the close connection between the past, the present and the future (the idea of yesterday's decisions having shaped our situation today, just as today's decisions lay the foundations of the possibilities which tomorrow will afford); (2) the diversity of alternative possibilities (the desirability of making people aware of the many alternatives which actually exist), (3) the ductility of the future (the idea being that we are not - and should beware of regarding ourselves as - passive victims of development trends, but can choose, control and create important parts of the future; (4) interdependence

(the idea that development problems ought best to be regarded as systems in which nearly everything is interconnected) and the closely associated global and ecological perspectives; and (5) the need - closely related to the above - for an overall approach to the problems and for responsibility for the whole of planet Earth.

These thoughts can of course be formulated and differentiated in various ways, for they are closely interconnected in some respects. But it is reasonable that they should be allowed in various ways to influence the design of school teaching aimed at preparing pupils for the future. The design of alternative possibilities may require a greater measure of divergent thinking than schools normally encourage at present; the development of individuals willing and able to "shape" a future may require more training in the assumption of responsibility than schools customarily offer, and so on.

Another frequently recurring viewpoint is that preparedness for the future cannot be inculcated as a separate package or within an individual subject but must be a task for all subjects (which need not prevent special thematic elements concerning future questions from having their appointed place). The idea of the close interconnection of the past, the present and the future can, for example, be naturally brought out in the teaching of history, but it can also be brought out in science subjects like biology or physics (for example, by pointing to past scientific discoveries and their various consequences); and the same intellectual theme can be brought out through the reading of literature.

One finds that many pupils have a pessimistic, sometimes extremely pessimistic view of the future. A great deal of popular literature about the future conveys a doomwatching attitude. A completely pessimistic paralysis can obviously be just as bad a way of starting off into the future as an unreflected, unrealistic optimism. This may be one important reason for future-oriented teaching to bring pupils into contact with a broad spectrum of images of the

future and to increase their knowledge of existing alternatives. When all is said and done, is not a realization of the difficulties entailed by future problems, combined with "a will to action nevertheless" the most realistic and fruitful approach today?

Continuing work

This project, which at present is receiving financial support from the National Board of Education (NBE) in Sweden, is fully entitled "Preparedness for the future as an educational objective in upper secondary schools", and most of the work described here has focussed on upper secondary schooling. The main collections of data have taken place at this level, and the practical school experiments are also being undertaken here. This NBE-funded upper secondary school project is currently expected to continue until the end of June 1983.

Certain minor supportive and comparative studies focussing on other school levels have also been conducted, in association with the current upper secondary school project. It would be an advantage if more comprehensive work could be launched with direct reference to compulsory schooling, and it would also be worthwhile if we could broaden our perspective by means of comparative studies in other countries.

Finally, we know too little, not only about the future and its possibilities, but also about the best way of preparing ourselves for the future. Very probably the images of the younger generation concerning the future and their willingness to help shape it will have a crucial bearing on the future which actually materializes. It therefore seems important for many people to take an interest in augmenting our knowledge of this field, for example by means of experiments in schools. After all, a single project cannot accomplish all that much on its own. We will be gratified, however, if we are able to prompt others to engage in further intellectual and practical activity concerning the questions outlined here.

It is partly for this reason that we have been unwilling to confine the account of our work to a number of concluding research reports. Instead we have preferred to present successive examples of our ongoing work in the form of handy small publications. We hope that these short descriptions will encourage other interested persons to give us their reactions, that some of these publications will be found useful in basic teacher training or in extension courses for teachers as discussion material, and that some of them will perhaps spark off separate research activities in this field. A list of our publications to date is appended to this report.

LIST OF PUBLICATIONS

These publications can be ordered from the project secretary:
Karin Dahlberg, Project "Preparedness for the Future",
School of Education, Box 23501, S-200 45 Malmö, Sweden.

- Adler-Karlsson, G. & the Project "Preparedness for the Future". Kulturrevolution som framtidsberedskap: Kamp mot konsumism, nyfattigdom och globala orättvisor. /Cultural revolution as preparation for the future: The struggle against consumism, neo-poverty and global injustice./ Särtryck och småtryck, No. 341, 1980.
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**ILLUSTRATIVE
EXPERT INTERVIEWS**

1.

AB: What do you think of first when you hear the words "preparedness for the future"?

CD: It seems to me that preparedness for the future involves a mixture of knowledge, skills and values. Someone is only prepared for the future when he has all three of those things. Those components change over time, so that while there are some things that we could say are always important for "preparedness for the future", we have to reevaluate that concept as the years go by, because some things become less important and other things for the first time become important. It is a slippery and changing kind of a concept.

AB: If you think of some of these components that you mention - knowledge, skills and values - what more specific associations do you have to them as related to preparedness for the future?

CD: When thinking of values, for example, preparedness for the future splits into two parts. There is one part of being prepared for the future in which one assumes that a certain future is going to come and attempts to react to it, and so there are values that we could call reactive values. For example, it looks as if economically worldwide the next few years will be very difficult, and so to have a set of values in which one's self-image is not tied up with affluence would be a very important aspect of preparedness for the future.

On the other hand, because the future can be shaped by human beings, there is another set of values that could be associated with active shaping of the future and here, showing my biases, certainly some of the values I would like people to have would be a respect for diversity and a desire for a pluralistic society. I think viewing values in those two groups is a useful way of looking at them.

AB: With respect to the component of skills, there are of course various kinds of jobs for which one can be prepared. Are you also thinking of some more general skills that are important to most people and that school could help develop as an aspect of preparedness for the future?

CD: Yes, I am definitely not trying to limit myself to occupational skills. The more basic skills of socialization, citizenship and getting along in society are all as important in the present as they are crucial for the future. One of the skills in preparedness for the future is the ability to do forecasting, to have some sense of what might be coming. Coupled with that is a skill that is perhaps even more important: understanding the consequences of one's actions, understanding the likely outcomes that an action could create.

One of the futurists in the USA, John Platt, has a saying that "high morality depends on accurate prophecy", which is a way of saying that unless you know what your life actions are likely to create, you can't really attempt to direct them to produce good. So I think those skills, being able to be forward-looking and then being able to understand the impact of choices in the present, are examples of preparedness for the future that people need to have.

AB: What about the expression "preparedness for the future"? I have not seen that much in the literature. Do you use it sometimes, or are there some other expressions with similar connotations that you do use?

CD: I don't think there is any single phrase that has come to be an expression that everyone uses. People talk about giving students the skills to live in the future, or they talk about anticipatory education, or perhaps future-oriented education. All these connote almost the same things as "preparedness for the future". Preparedness for the future is perhaps more accurate as a phrase.

AB: But it is not used very much, is it? I don't think I have seen that in English.

CD: I think that in English there may be a subtle implication that something definite is going to happen that one then prepares for. Many people in futuristics also believe that the future is shapable. The word "preparedness" doesn't convey that.

2.

AB: If you think back on your own school days, did school then, in your opinion, make you and your schoolmates well equipped to meet and form the future?

CD: Absolutely not. Not only did my own school, which was in public schools in the US, not prepare me for it, but as I come into contact as an adult with other adults who had different educational experiences, none of them indicate they feel prepared by their school experience for the future. No one feels that he or she had the kind of education that really made them ready for tomorrow.

AB: What were the specific drawbacks of schools in this respect?

CD: I don't think that American schools have talked very much about the sort of concept: Where are we in history? History has been taught in the school years generally up to about 1910. There was seldom an attempt to set the present into some sort of a larger context. Further, there was never an attempt to relate the skills trained (reading skills, writing skills and being able to understand certain concepts in science or in the social sciences) to any future-skills that one might need. One learned it because it was in the curriculum. There was never an attempt to apply skills in a meaningful life-context with people. So I think the schools have failed on both setting a context and relating what is learned to that context.

3.

AB: Do you believe that school, as you know it today, gives the students a good preparedness to meet and form the future?

CD: Not in general. I think that this conference and similar conferences illustrate that there are many teachers who as individuals are beginning to prepare their students in this way, and I think that there are a few school districts that as organizations are beginning to prepare students in this manner. But I don't believe that most teachers in the USA are familiar with these concepts, and certainly there are very few school districts that as a whole approach education in a future-oriented way.

4.

AB: Do you think that the school could do more to make the students well equipped to meet and form the future, and what are some of the steps and measures to be taken that you think of first?

Could you make some specific suggestions?

CD: I think it is important that the teacher in the classroom understands and is able to use the idea of preparedness for the future. Students learn much of what they learn through modelling the teacher, and even a very well-written curriculum can be mistaught by a teacher who doesn't understand the fundamental concepts in it.

I also think that it is quite important to have the future not taught as some sort of a separate subject or separate set of skills, but rather incorporated in small fashion into all the things that one normally talks about during the school day. So this would not be a matter of creating some specialists or some special resources or some special classes, but rather a matter of taking teachers now in the classrooms and showing how they can teach the same material, but incorporate a futures context and incorporate some future skills within it. Other than retraining teachers, that should not be hard to do, because we are not talking about

needing a new type of educational system. We are not talking about needing more money. We are not talking about anything that might disturb too much the present system. But we are talking about a new perspective that could be brought into it.

AB: And that would be a task, for instance, for teacher education?

CD: It would be a task to some extent for pre-service teacher education, but I think even more fundamentally for in-service education.

AB: Are there present attempts to go into pre-service and in-service teacher education in this country with this kind of training?

CD: Through organizations like the Education Section of the World Future Society, yes. We have people in teacher preparation colleges who are modelling how one can incorporate such ideas in pre-service teacher education. We have people like myself who do a great deal of in-service teacher education, attempting to train teachers in how to use these tools. We have books, pamphlets and newsletters that attempt to reach teachers who don't have direct contact with someone in this field. We have degree programs in futures that are turning out people who are capable of acting as disseminators for these kinds of skills. But it is not a nationally organized movement. It is more a matter of a number of people who have a vision of what education might be, attempting to act out that vision in their own lives.

AB: You said you are yourself organizing some in-service courses of this kind. Could you give me some idea about what you would do in such a course?

CD: Generally I would find it most useful to do such courses in a workshop format with a group of teachers, 30 people or less, and preferably a group of teachers who all teach the same grade-level and who all are responsible for the same content. Because then I can be extremely

specific, and I can come in and say: "Teach this content, using your textbook that you are using now. Here are some tools that you can use to teach some of these things in a way that will be more motivating to the students and will also give them some new skills that they would not otherwise acquire." Then I can demonstrate very concretely what some of these teaching procedures might be.

Sometimes I am called in and asked to address a group of 400. Then it is more a consciousness-raising sort of thing, in which I attempt to get people interested in the area, so that they can get out and learn something about it themselves. I give them access to some written resources that they can follow up if they choose. But the ideal situation would be a workshop situation. I am convinced that enough basic tools to get teachers started can be communicated in eight hours or less.

AB: Could you recommend some written material that would be useful for such teacher-education purposes?

CD: The single best source in the U.S. is a book by a former doctoral student of mine, Draper Kauffman, called "Teaching the Future". It contains a collection of useful techniques. The National Council for the Social Studies has just published a book for social studies teachers (Fitch & Svengalis: "Futures Unlimited"). The National Education Association has published a similar smaller pamphlet by Kauffman that gets into some of the same information. There are many small academic programs, as presentations at this conference may illustrate, that have materials that may not be published, but are in mimeograph form. There are larger networks like the network that the University of Massachusetts runs, where there is a regular newsletter that contains teaching ideas. So there is a whole spectrum - from a teacher having done something and distributing some informal material all the way up to a formally published book.

AB: You mentioned that Draper Kauffman was a doctoral student of yours. Was that book "Teaching the Future" some kind of product from his doctoral work?

CD: The book was connected with his doctoral dissertation. Many of the techniques in the book were developed and refined in field tests by students at the futures program over about a five year period and by teachers in the network of teachers we created. So these were ideas that had gone through a process of being used in the schools and modified until they met certain criteria. And Kauffman simply changed what was in this dissertation to the point that it was easily readable by someone in the general public.

5.

AB: If you were an upper-secondary school teacher in a subject with which you are particularly familiar, how would you like to make the students more conscious of and prepared for the future?

CD: I have a background in science education, and that would be the secondary school subject with which I am most familiar. That is in many ways a particularly easy subject to relate to the future, because so much is happening in any field of science that may help to shape what the future will be like. I think that I would start from some fundamental principles in the sciences, talk about some of the recent technological inventions that those principles had made possible, and then turn to talk about the ethical implications in society now and 20 years from now.

For example, I teach a course in drugs at the University, and I discuss some of the recent advances in drugs and then some of the problems that these are likely to create in the next 10 or 20 years in society. The idea is that then the students feel that there is some purpose to learning the fundamental principle, if it offers a tool for understanding something that's going to later become important in their life. I might also then use some of the futures tools in Kauffman's

book to allow the students to make their own forecasts and assessments of what some of the implications of these technologies might be, as a way of getting them directly involved in building some skills of their own instead of simply accepting my say-so.

AB: Do you think that most subjects at the secondary school level could be used for future-oriented teaching?

CD: I think it might be slightly more difficult in some than in others, but I think that most can in fact be used. Most of what we give students at the secondary school level, we teach them because we think it will be useful for them at some future point in their lives. By tracing back that reasoning, usually we can discover something about the material that lends itself to a futures approach.

6.

AB: Is there any new knowledge or finding in your special field that could be of importance to our preparedness for the future and of which, in your opinion, school should take advantage in one way or the other?

Now I am thinking of your field as the field of futuristics.

CD: I think that we have, over the last few years in the futures field, come to some understanding of the historical period that we seem to be moving into, and I think there is a growing agreement in the field that the 1980s will be a very difficult period, both on an economic level and on a political level, with general tensions in society. I think that my talk yesterday (and I suppose, for that matter, my talk in Minneapolis) both were an attempt to say: "Here is something that is coming out of the field of futures that has a direct bearing on education and a direct bearing on teachers, and this is what we need to begin to do to be prepared for what is coming." So those talks were an attempt to link something recently happening in the field to

something that might be of use to teachers in the schools. Each time we gain a better understanding of what the next 7 to 10 years may be about, I think there is a direct translation into both educational policy and educational content.

7.

AB: School work directed towards the future may work with "probable futures", "possible futures" and "desirable futures". The latter ones bring evaluation problems to the fore that may be controversial. How do you look upon the role of school in connection with these three types of visions of the future?

CD: One of the category systems that I use with my introductory graduate students in futures research is to talk about three different types of futurists. One group may be called the theoretical futurists. If we use the metaphor that the future is a tree with different branches being different alternative futures, these would be the futurists who work with identifying the different possible futures and then assessing their probability.

Then we have a second class of futurists who are not theoretical futurists, but who are visionaries. These are, if you will, people who want to add a branch to the tree. People who want to take a future that is possible but very improbable, perhaps not even discussed, and to create and invent a future that is very important. The core of a visionary is to say: "This is the way that we should be."

And then there is a third class of futurists (what one might call applied futurists, in contrast to the theoretical futurists) who work with the present and how present decisions can be structured to choose among the different types of alternatives that are open to us. These are people who work with both probability and also, in a different way, with the normative futures, now not saying: "This is what I believe, and you should

believe this too", but saying "What do you believe? And then let's talk about how you can attain what you know you already want."

In terms of work in schools, I think going through this sort of discussion and demonstration of what different futurists do is useful. I think that everything that we do in schools has a normative aspect to it, and so futures in a sense is no more risky than other topics in the curriculum except that, because it is new, we tend to remember that it has a normative aspect, whereas normative aspects of other topics tend often to be disguised and forgotten.

I think that a lot of good futurist work involves giving students the power to think about and comprehend their own futures, which means a fundamental acceptance of some of their normative views about the future, yet, at the same time trying to show them the consequences of having certain normative views in terms of their own lives and in terms of everybody else's lives. So the students' views are not accepted without being examined, but they are fundamentally accepted in terms of there not being a single view that's considered to be correct.

AB: Do you envisage problems with parents, for instance, if such things as desirable futures are discussed in school?

CD: I think that some parents might have a negative response, but if they understand that it is not one particular future that is being painted as the most desirable, that rather people are comparing their images of desirable futures, then some of the concern is removed (although some may remain). It is a little like teaching ethics in the schools. Teaching ethics is not the same as teaching morality. Ethics is a comparative subject, whereas with morality you are attempting to inculcate a system of values. Futures is a comparative subject. If one was simply a visionary in the schools, one might be attempting to inculcate a particular future into the students. I think that parents who are threatened by this area are probably parents that do not understand

the fundamental purpose of education and do not understand that every subject in the school curriculum has a certain kind of normative bias.

AB: One other aspect related to that might be the question of pessimism and optimism and the way the students feel about the power to do things, to take part in shaping the future. It has sometimes been said that work dealing with futures lead to people feeling overwhelmed by the difficulties and the problems in the world. How do you react to that?

CD: I think that that is quite possible. The key to overcoming this problem is exposure to a variety of different people's view-points on the future. This again is another reason for having the future be a small component of many classrooms rather than a large component in a few classrooms, because each teacher will have a personal view of the future that will creep through, no matter how careful he or she is to disguise that. If a student is exposed to just one of two teachers, the student may be swept along by these teachers' personal viewpoints. But if students are exposed in many of their subjects to different perceptions of what the future may be about, on one level that may be a little confusing until the student forms his or her own judgements, but on another level it prevents this kind of emotional "falling into" one kind of optimism or one type of pessimism about the future.

I think that it is a hard field to work in seriously and not be pessimistic at present. But I think that this is less of a hazard for young people than it is for adults. It's perhaps most a hazard for people who work all the time in the field rather than people who are simply exposed to it as one of the skills that they are learning in school.

AB: We mentioned in the beginning of our discussion the "ability to shape". What would you think would be some

of the strategies in school to teach ability or willingness to take part in society, to shape something more than your own life?

CD: I think that one begins in the future on an emotional level by looking at one's personal future and the ways in which forecasting and assessment can be used to control one's own decisions in one's own life. Then people frequently attempt to jump to the opposite extreme and say: "How can I now change the future of the world or the future of my society?" This is too large a jump to make because the kinds of measures that one uses and the time-scale involved are very, very different.

So I think with students it should be a process of gradually extending the size of the context that is being looked at. One can ask: "How can I change my classroom in the future?" and then "How does one shape our school in the future?" and then perhaps "the neighbourhood" and "the community" and - eventually - "the society". Do not increase the size of the context before the students have the skills to see that there are ways in any context to attempt to shape what is going on.

8.

AB: Is there anything important about "preparedness for the future" and "school and the future" which we have not discussed?

CD: No, I think this has been a very good set of questions and you really have covered a lot of territory. I would only say that I think that it is very important that a great deal of change take place quickly because of some of the dynamics in the world that are going on. I also think that the U.S. is very insular and parochial in some ways in its viewpoints on what education can be and what the future can be, and I would welcome very much the involvement of other countries in their own forms of educational futures, because this will bring a diversity of perspectives into the field that I don't see at the moment. In some ways, because of our cultural contacts, we Americans are not readily capable of generating

these alternative perspectives.

AB: I might just ask you a few other things about your own special fields. Your work within the University of Houston at Clear Lake City involves, I understand, a Masters program in Studies of the Futures. Could you say a few words about that: What are the main objectives? What kind of people would go into that?

CD: We have really two types of people that go into our Masters program. One sort of person is someone who already has an established professional career and is looking for a secondary skill, to be useful in what he or she already does, so this person is an educator, a decision-maker, a business-person, a reporter or whatever, and would like to know something about futures. We have a second type of student who is perhaps not doing the Masters as a terminal degree but at least choosing the Masters as the most advanced degree that they plan to attain for a while. These students do not have a professional occupation at present but are hoping to use futures as a way of developing, not necessarily working as a futurist, but working as someone who brings in strategic planning skills, management skills, writing skills and thinking skills. These students come out with the Masters in Futures in an attempt to use this credential to get a job.

The core content of the program is a set of four required courses that are designed to be useful for both types of students. Then there is a considerable amount of diversity that students can take beyond that within the basic 36 credit hours of the program.

AB: Can they also proceed to a doctoral degree?

CD: Yes, we have a few students who choose to go on for a doctoral degree. One of the tracks that we have in the Masters program is a doctoral preparation track that involves writing a Masters thesis and involves a carefully chosen set of courses to give them necessary background to go on and do that.

AB: Would the area for the doctoral program also be called futures studies?

CD: There really isn't anywhere in the U.S. a doctorate in futures studies only. The University of Massachusetts gives a doctorate in education and future studies. The University of Minnesota, in social science and future studies. The University of Southern California, in business and futures studies. We have the only Masters program that is in fact a Masters program only in Studies of the Future, without some other field attached. But there is no doctoral program that is a doctoral program only in future studies.

AB: The other area among your interests I thought about is the World Future Society and the Education Section there. What would you see as a role for this for the near future? What would be some of the important tasks?

CD: Let me try to separate the Education Section from the World Future Society, because I think the two are becoming rapidly more distinct, and I think the goals of the Education Section are much more ambitious than the goals of the World Future Society. I think that most people who are in the Education Section are involved because they believe that education is an important force in the future society and they don't believe that it's being used very well now. So there is both a recognition of an important area that they want to know more about and also a normative vision of wanting to change what's going on in the present in terms of how education is handled.

I think that we are an umbrella organization allowing people who want to form smaller special-interest groups to do so. I think we are an information-disseminating organization that attempts to alert people who haven't heard of the field to the fact that there are some interesting developments in this area. And I think in a limited but growing way we have a research component that attempts to study seriously various aspects of the future of education in order to make progress in the

understanding of those. So our organization plays a lot of different roles, and I think it has been successful in most of those roles so far.

NOTES ON THE INTERVIEWEE

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B.S. 1969, California Institute of Technology, Chemistry
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Ed.D. 1972, University of Massachusetts, Science Education
and Studies of the Future

Professional employment:

University of Massachusetts: Assistant Professor, 1972-74
University of Houston at Clear Lake City: Assistant
Professor, 1974-76; Associate Professor, 1976-present

Professional activities:

Co-founder of Program for the Study of the Future in
Education, University of Massachusetts (first doctoral
level futures program in the U.S.A.); director of this
program, 1972-74;
Co-founded and co-administers graduate programs in futures
research, University of Houston at Clear Lake City;
Founding president of Education Section, World Future
Society, from 1976.

Sample publications:

Co-author, The Far Side of the Future (Washington, D.C.:
World Future Society, 1978); Co-editor, Educational Futures:
Sourcebook I (Washington, D.C.: World Future Society, 1979)

1.

AB: What do you think of first when you hear the words "preparedness for the future"?

EL: The main thing is to have a willingness to plan ahead, a not too narrow time horizon, and a reasonable base of accurate knowledge of the world. This means a need for schools to inform better about what we now know about current problems and future trends. A science fiction view of the world has dominated too much, and the technological advances have been too much in the foreground. Students should be made aware of the many difficult problems of the world and be activated to think about them and to discuss possible alternative futures as well as criteria and norms for such changes.

AB: Are there other things - besides knowledge - that you feel may be important to develop in schools in this perspective, such as attitudes and values?

EL: Attitudes and values are certainly important, but as a rule the school should not teach values and attitudes directly; one should not tell the students what values and attitudes to have. But it is important to foster openness towards information and change. Seminar-like discussions of alternative views might be one way of helping students develop in that direction.

AB: What are some of the areas of information that you feel are important to deal with in this connection?

EL: The main question is how we are going to create a world where we can survive and live with a reasonable standard. Materials from the Club of Rome, work on the New International Economic Order, and Interfutures (work within OECD) are examples of what would be important to deal with. It should also be stressed that it is necessary to discuss time periods that are not too short - at least 20 years - but there is a reluctance, also among politicians, to deal with perspectives of that length.

There is for example, a recent report to the former president of the U.S., titled "Global 2000". My guess is that it will not be used very much by Mr. Reagan, in spite of the fact that it was requested from his predecessor.

AB: Would you call yourself an optimist or a pessimist?

EL: I have been an optimist, but since a year or so I conceptualize myself more as a pessimist. But in neither case has this taken away my willingness to take part in efforts to change. There is no necessary correlation here. If you are an optimist, you may feel that things go well and that there is no need to make any extra effort. If you are a pessimist on the other hand, you may feel so overwhelmed by the difficulties that you feel that it is not worth trying.

2.

AB: If you think back on your own school days, did school then, in your opinion, make you and your schoolmates well equipped to meet and form the future?

EL: My personal school background was rather special. I was born in Hungary and developed an early talent for music. Part of my schooling was in Hungary, part in the United States, part in other countries. So my experience might not be representative. Nevertheless, my general feeling is that the schools then did not give me and my schoolmates any particularly good starting-points as to preparedness to meet and form the future. My personal interest in this area was stimulated by influences outside school.

3.

AB: Do you believe that school, as you know it today, gives the students a good preparedness to meet and form the future?

EL: There are some developments in the United States that indicate attempts in this direction, mostly at the university level (such as at the University of Houston and the University of Massachusetts) and among some es-

pecially interested teachers at lower levels. But as a general rule, so far the school has not done very much to develop such activities or to inform students in ways that I feel are important.

4.

AB: Do you think that the school could do more to make the students well equipped to meet and form the future? What are some of the steps and measures to be taken that you think of first?

EL: Yes, I think that the school could and should do considerably more, and I have already suggested some of the problem areas that should be treated. The U.N. International School has done good work here. What is important is curriculum and textbook development. Considerable data and source materials have been developed during recent years, but most of this is fairly technical. There is a need to translate and transform such materials into suitable textbook form. There is also a need for teacher training to make this type of teaching possible. In addition, it should be important to try to break away from the traditional subject boundaries in school in order to make it possible for the students to see the wholistic patterns of current and future problems.

AB: Would you also feel that besides infusing the school with new information, it should be of value and importance to try to develop attitudes and behavior tendencies consonant with a future-oriented role?

EL: Yes, but it is more difficult for me to say how this should be done. I think that involving students in active work with current problems, where they discuss and write reports, will have an effect not only on their knowledge, but also on their attitudes, values and willingness to take an active part in developing a better future.

AB: In your book "The Inner Limits of Mankind" you make a distinction between "outer" and "inner" limits when dealing with today's and tomorrow's problems. What are the school's possibilities, in your opinion, in dealing

with these two categories of limitations?

EL: I think the school should deal with both. In the book you mention I state that in my opinion the decisive limits are not the outer ones (in terms of finite resources and material vulnerability). Instead the most crucial limits are psychological, cultural and political limits created by individuals and societies, as seen in myopia, irresponsibility and mismanagement. It should certainly be important to deal with these things in schools. There are hardly any world problems that cannot be traced to human errors and could not be overcome by changes in human behavior.

5.

AB: If you were an upper-secondary school teacher in a subject with which you are particularly familiar, how would you like to make the students more conscious of and prepared for the future?

EL: I might have been teaching philosophy. If so, I would have tried to discuss with the students what messages the old thinkers might have for us today. In general, I feel that literature and the humanities have been much too preoccupied with the past. The quick pace of development during recent years is treated too little, and there is too little use made of the past to develop ideas about the present and the future. I would have liked to see much more of this.

6.

AB: Is there any new knowledge or finding in your special fields that could be of importance to our preparedness for the future and of which, in your opinion, school should take advantage in one way or the other?

EL: Yes, I feel that there is a lot of such information from recent years available, and the problem is - as I indicated earlier - that this has not so far developed into a form that can be easily used in schools.

AB: You and your colleagues have done extensive and important work on the Goals of Mankind and the New International Economic Order. Are any attempts made at present to translate this large body of literature into textbooks for school?

EL: So far, this has not been done. It should certainly be considered, but the initiative should come from other groups. It is not a primary task for us at UNITAR to work on textbook development.

7.

AB: School work directed towards the future may work with "probable futures", "possible futures" and "desirable futures". As far as "desirable futures" are concerned, they might bring evaluation problems to the fore that may sometimes seem controversial. How do you look upon the role of school in connection with these three types of visions of the future?

EL: I think all three perspectives are important. It should be important to be aware of the high-probability futures and to be aware of that fact that some of these high-probability futures (as they would develop if there are no decisive interventions) are very undesirable. It should also be important to deal with possible futures to develop a sense of alternative possibilities. However, there might be a risk of becoming too utopian here; some degree of restraint and testing of realism should be of importance. Finally, desirable futures should obviously be dealt with, not in order to indoctrinate any particular desirable future, but to train the students to evaluate the desirability of various developments in relation to norms and priorities. If done properly, I do not think that this should be difficult to get accepted in the Scandinavian countries, or in the U.S. To focus on problems and to discuss possible solutions is clearly a very appropriate thing to do.

8.

AB: Is there anything important about "preparedness for the future" or "school and the future" which you would like to add?

EL: Merely that I feel that it is very important to increase the influence of the school in the ways your project seems to be interested in, and that I would like to be informed of further developments. Another thought is, that it is important first of all to educate the school administrations, in order to have administrators at various levels who feel that the future is an important and fruitful field. The acceptance of this idea by school administrators might be a first step toward realizing the goals we discussed.

NOTES ON THE INTERVIEWEE

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Geneseo from 1968; permanent; on leave
Special Fellow, United Nations Institute for Training
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Professional activities:

Director, NIEO Research Unit at UNITAR (1975-)
Project Director, "Progress in the Establishment of the
New International Economic Order" (1977-1980)
Ex. Sec. of the "Programme on Regional and Interregional
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Sample publications:

The systems view of the world. New York: Braziller, 1972.
A strategy for the future. New York: Braziller, 1974.
Editor, Goals in a global community. (2 vols.) New York:
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Principal author, Goals for mankind: Report to the
Club of Rome. New York: Dutton, 1977-78.
The inner limits of mankind: Heretical reflections on
contemporary values, culture, and politics. New York:
Pergamon Press, 1978.
Systems science and world order: Selected studies.
Oxford: Pergamon Press, 1982 (in press).

1.

AB: What do you think of first when you hear the words "preparedness for the future"?

SM: I have been involved so long in this enterprise that it may be difficult to give you a free associative answer. But I will try. I am concerned about the survival problems in terms of warfare and eco-catastrophy and at the same time very much aware of the survival problems that many face on a grim day-to-day basis. This influences whatever I say about preparedness. I think in terms of holistic systems: the earth and the total human society is the unit I attend to. And I think that we are going through a major transformation of this global society. The change from now to let us say 2050 will be as important as when feudalism broke down and the state system emerged; maybe even more important. It seems unlikely that we will get to 2050 without some planetary organization.

Influenced by these notions of survival problems and by the notion that we are going through a major transformation almost as big as when human groups moved from hunting to agriculture, I start with the view that we must now develop an educational strategy which makes large numbers of people understand what is happening to them. The failure of the present ideologies, institutions, and leaders to say out loud that this King is naked and that a new one is emerging is one of the reasons that we are not able to cope with our problems. So I would want people to understand the depth of the change that is taking place, that we have moved not just to an era of interdependence, but to an era of interpenetration. There is no place to hide, and there is no way of playing self-reliance without accommodating to the

highly interactive, interpenetrating global societal era in which we live. To put the matter simply, it is not possible to keep out the global communication level. So preparedness for me means somehow getting enough people to understand and to be involved in that transformation.

AB: For an individual that would mean, I guess, at least to acquire knowledge - knowledge of the state of the world and the probable developments. Would you also think in terms of developing attitudes and values?

SM: Important to me would be a value framework that would permit one to help transform the society in a way that would lead to a just world. Simultaneously it would be important to develop schools and educational techniques that would help people live in that world. I am a cause-oriented person more than an educator, but I have worked with people in various schools of education (at Harvard and Illinois) on materials that we use for high schools, so I have given some thought to what kind of skills you want to give students; however, we have worked more on ideational materials than on techniques of coping. I guess I have started from the view that if you are aware of the changes, you will be better able to cope. But I would want that coping and dealing with the transformation is influenced by a set of values.

At this institute we have spent some time on value analyses. If you start from the values of peace, economic well-being, social justice, ecological stability, and participation, and if you use them as analytic tools in perceiving, describing and hypotheses forming, I feel you would understand what is taking place on the globe in a different way, you would ask different questions, and you would get different solutions (as compared to when you think traditionally in terms of state systems). You are now interested in how to maximize these values for four billion people - becoming more than six billions by the end of the century.

There are of course other values (ethical, religious, national), but we need sharing some fundamental values, and the set of five values I mentioned seem to be reasonably acceptable for the global community. I consider them to be on the same level of dignity, and I will not give one priority over the other. So values are very important to us and to my view of preparedness for the future.

In stating that values are very important, I also want to make clear that identifying and contributing to the struggles of the oppressed is an essential ingredient of what we believe is necessary for scholars to engage in if they wish to understand and promote a just world order. The values we hold stem from our desire to assist those in oppressed circumstances. Indeed, we are now trying to combine a struggle theory of history with a vision of a just world order. To that end we are developing the concept of "people's security" as an alternative to "rulers' security"; so it is important to remember that the values go to people, and especially those who are the victims of the present system.

AB: In some of my questions I use the two expressions "meet" and "form" the future. Do you feel that these two terms indicate different kinds of preparedness?

SM: I have not given that much thought. I guess one could think of your question in these terms: Do we bring a different set of skills to our reacting and coping as compared to when we are trying to make or shape the world? I guess there are different types of techniques involved, but I will keep your question in mind. In general, our ambitions are trying to help shape the future. But adequate reactions are important too, of course.

2.

AB: If you think back on your own school days, did school then, in your opinion, make you and your schoolmates well equipped to meet and form the future? Where did you go to school?

SM: In the United States. I went to a school in a coal mining town of some 100,000 people in Pennsylvania. It was an ordinary grammar school education, not particularly good, not particularly bad. I went to school during the height of the great depression in the United States, my father - a small business man - went bankrupt, and the whole society was coping, just coping. Franklin Roosevelt was providing hope, but little else. There was not a vision of a future, just attempts to get out of the plight we were in. I do not conceive of the schools of that time as having been liberating or creative with regard to the future. There was a feeling that we were in a terrible mess and a hope to get out of it and the general idea that if we do, we will all go back to the same type of middle-class living as before. - Then World War II came, and I went off to a medical corps in an infantry organization. That was a broadening experience.

3.

AB: Do you believe that school, as you know it today in the United States, gives the students a good preparedness to meet and form the future?

SM: My guess is that it would be high if 10 % of the schools did that in a conscious, articulate fashion. It is certainly not more than that, and these would be beacon schools in some rather well-to-do suburban areas and some private schools. So the simplest answer is: Probably not.

AB: What kind of deficiencies then in this respect do you see in what most schools do?

SM: I think that the deficiencies have to do with a failure to explain the depth of the transformation we are involved in and the idea that our problems can all be

coped with in a business-as-usual fashion, perhaps business-as-usual in a more efficient way. There is a general lack of imagination. In addition, schools do not do a very good job of preparing people for a cybernetic world with its audio-visual and computer revolution.

4.

AB: Do you think that the school could do more to make the students well equipped to meet and form the future? If so, what are some of the steps and measures to be taken that you think of first?

SM: Yes, I think that the schools could and should do much more. One step would be a curriculum revision with the intent to stress a global perspective, but tying that global perspective to relevant local circumstances. I think that is essential.

In order to make young people able to cope with the future, you should also provide them with a sense of continuity, peculiarly enough. There is a saying in the Jewish tradition which in translation says: "If I am not for myself, who will be for me? If I am only for myself, what am I?" There is the notion that you have to understand who you are first. But is it crucial to give a young person a sense that he is a participant in the global community, that there is an identity which leads to human solidarity. Born in Stockholm, you may be a Swede or a member of Western society, but part of you, intertwining all other identities, is part of the human race. Imagine there is a child without parents 5 miles outside Stockholm and a child without food 75 miles outside Lima of Peru. Why do we take care of one child and not the other? That is a kind of question to be brought up, illustrating identity at home and identity with the human race, through simulations or games or other techniques.

I think it is important to have an excited group of people. If I get a group of teachers excited about

this kind of framework, I honestly do not believe that the particular methods make a lot of difference. But I think it is important to try to pick up current techniques so that the kids feel that they are doing what everybody else is doing.

AB: Do you think this approach that you have just described would fit into most of the subjects at school?

SM: I think you could definitely put it in both the social sciences and in the humanities. I would really give history a forward-looking role. In fact, I would go through history and say at different points of time: What would have happened if at this juncture this had occurred? I would try to give the kids a sense of alternative possibilities.

Obviously the great revolution that is taking place today is in the genetic field, and if we do not prepare our students for that kind of engineering and its implications to social organization, we are as a race looking for trouble. It is important to look at the social consequences of major inventions in the biological and physical fields.

AB: You mentioned that the institute here has been involved in some curriculum development. Could you tell me something about that?

SM: For more details you should contact Betty Reardon. She was in charge of our school program for 10 years. She could send you names and addresses of several people who teach futures in the schools. But in general, I can say that our concern has been with World Order, but we have treated World Order as a normative interdisciplinary futuristic exercise. We had a major project, called "The World Order Models Project". That involved initially seven groups of scholars from various parts of the world, describing their own "preferred worlds", the preferred worlds of the 1990s. We brought out six books on these topics which were aimed at the universities. While we were doing this, Betty Reardon was involved in producing materials and training teachers to deal with alternative futures,

trying to cope with world problems such as world poverty, social injustice, ecological instability etc. (that is, the reverse of the values I mentioned earlier). By the way, are you familiar with the Center for Global Perspectives downtown?

AB: Yes, I have visited them and am receiving information from them.

SM: O.K., because they do a lot of work in this area.

5.

AB: If you were an upper-secondary school teacher in a subject with which you are particularly familiar, how would you like to make the students more conscious of and prepared for the future?

SM: I assume that I would teach in the field of social science. We use a framework which says: We are starting from a diagnosis of the present circumstances. We are going to do a prognosis. Then we are going to state a preferred world, and finally we are going to talk about transition. If I was teaching social study, whatever particular area I was teaching, I would try to deal with it in the way I just talked about. Whether I was talking about transportation, communication, agriculture or politics, I would ask the students and myself: Where is the United States and the world in that particular area? How is this likely to look twenty years from now? How would you like it to look? And if you like it to look that way, what sort of things will have to happen or will have to be done in order that we get that outcome? What you hope the students will get out of this exercise is some sense of factual problems as well as some awareness of how to go about developing a preferred world corresponding to your values.

6.

AB: Is there any new knowledge or finding in your special fields that could be of importance to our preparedness for the future and of which, in your opinion, school should take advantage in one way or the other?

SM: I do not know to what extent schools are actually using holistic global data. Students should be aware of the population expansion from 1930 to the year 2000: from two billion to six billion people, and consider what that means now for food, energy etc. Are schools actually taking advantage of the data that is being collected and analyzed by the World Bank, the U.N. etc.? And I think a lot of the modelling that has been done by various people thinking about the future has produced fruitful ways of looking at things, alternative scenarios that schools should take advantage of.

Something which may sound somewhat more remote, but which may be useful to deal with in schools are what anthropologists and archeologists have to tell us about what happened between 10,000 B.C. and 5,000 B.C. when the change from hunting to agriculture took place. Such information may be important to understand thoroughgoing changes.

7.

AB: School work directed towards the future may work with "probable futures", "possible futures" and "desirable futures". As far as "desirable futures" are concerned, they might bring evaluation problems to the fore that may sometimes seem controversial. How do you look upon the role of school in connection with these three types of visions of the future?

SM: I am for all three. They should all be used in school. Of course, you should make sure that the kids do not feel oppressed by your particular preferred world, and that they get the opportunity to work on their own. If there is anything that the kids ought to get in terms of futures training, it is the awareness that futurism is an ethical domain. The worst thing is if the school

stops at informing about straight-line projections of present trends. This does not let the students in on the important side of the whole business at all.

AB: You feel that if somebody thinks this makes the school more political than it should be, this is a risk that has to be taken?

SM: Yes, it has to be taken, especially since the school is already political. Passing on a tradition is also political.

AB: A related aspect is the optimism-pessimism dimension. Sometimes it is said that when you talk about the future in school, the children may be too overwhelmed by all the difficulties and problems of the world and feel so hopeless that they may withdraw from any responsibility. How do you feel about that?

SM: I think that is a real problem. I would not like to minimize it. I think sensitivity to this issue is very important.

AB: Would you describe yourself as an optimist or as a pessimist?

SM: I am a pessimist in terms of my hardheaded projections. For example, I believe that the likelihood of a major termuclear exchange in the next 50 years is somewhere between 1 out of 1,000 and 1 out of 10,000. I do not consider those levels of risk acceptable. I also think that the Orwellian 1984 type of scenario or other types of very repressive regimes are very likely scenarios. These are in the range from 1 out of 50 to 1 out of 500. So some of my projections are rather pessimistic. Indeed, the projections below 1 out of 50 are the Kissingerian, Pentagonal world or more and more anarchical conditions existing in various parts of the world. But these views do not stop me from attempting to change things. I experience what we do in this place to be fun, to be exciting. In that sense, I act like an optimist, nevertheless.

NOTES ON THE INTERVIEWEE

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B.A., Syracuse University, 1947

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Professional employment:

Professor of International Law, Rutgers Law School
(from 1961)

President, Institute for World Order, 1974-1977

Professor of World Order Studies, Columbia University
(from 1978)

Professional activities:

Director, World Order Models Project (an effort by a team
of global scholars to define preferred worlds for
the 1990s)

Sample publications:

Co-author, Strategy of world order. (4 vols.) New York:
World Law Fund., 1972

Editor, On the creation of a just world order. New York:
The Free Press, 1975.

General editor of series, Preferred worlds for the 1990s.
(6 vols.) New York: The Free Press, 1975-1979.

1.

AB: What do you think of first when you hear the words "preparedness for the future"?

AP: The first word that comes to mind is "empowerment". And that has several dimensions; these include the social dimension, the environmental dimension and the personal dimension. The social dimension includes basic communications ability, ability to control and utilize technology, and ability to identify and deal with major social forces within the society. Personal empowerment falls in the area of life-planning skills, diet exercise, a positive image of the self in the future, self-esteem level, and what you may call, for lack of a better term, the happiness function.

And environmental empowerment has to do with developing an awareness and understanding of the limits and possibilities of one's environment, particularly one's physical environment. This will stretch very far before it breaks, but once it breaks you can't get it back. It is possible to pollute the air and then clean it up again, but you need to be aware that there are certain costs that come from polluting the air. People need to be aware that there is a finite amount of resources. This sounds very non-radical and not very unusual, but in point of fact, many educational institutions behave as if they had never heard of these things.

AB: That gives quite an impressive list of things to think of. You stressed some aspects related to knowledge and some aspects related to skills or behavioral tendencies; you also mentioned the "happiness function". What exactly do you include under that label?

AP: The ability to pin-point something in the world that makes you happy and to experience those things on a somewhat regular kind of basis. Many people never even think about what really makes them happy and what doesn't.

Oftentimes even when they have pleasurable experiences, they never think to make sure that, although they may have a busy work schedule, they set aside some time to recreate that particular experience which made them happy - as a kind of physical and psychological renewal process.

2.

AB: If you think back on your own school days, did school then in your opinion, make you and your schoolmates well equipped to meet and form the future (in the senses that you have mentioned)?

AP: In some ways it did, and in some ways it was an abysmal failure. In the area of political and social-change strategies it was a very positive experience. Partially that has to do with the fact that the American political system is very well-defined. Everyone, at least that I knew, was made to virtually memorize the Constitution. Consequently, you get some reasonable sense of how the nation's laws are made and changed.

Areas that it did a grossly poor job in, include developing an appreciation toward the similarities and diversities of all people. Schools were then, and in many cases still are today, racially and ethnically and even socially segregated institutions in the U.S. This is not how the world is, and if you are attempting to empower people to live in the world, that is a gross injustice.

In the area of personal empowerment school did not play a major role. The fields of art, music, visual and performing arts, even physical education, were grossly neglected and remain so to this day. Appreciation for the environment was not touched on. Science curriculum was in fact a curriculum associated with technological developments. The area of technology did train us to be good consumers of technology. Never before has a generation had to make so many choices in the area of technology including personal technology.

AB: You mentioned that you thought there was a positive

influence as to political change strategies, and you mentioned that you were taught to memorize the Constitution. Do you also feel that you learned as a student to take an active part - to form and shape things that you had within your reach? Or would that be something that was neglected?

AP: I would say that that was somewhat neglected.

3.

AB: Do you believe that school, as you know it today, gives the students a good preparedness to meet and form the future?

AP: In terms of meeting the future, it gives some students, particularly white middle-class and well-to-do students, a good sense of how to meet it, in the social areas and environmental areas; more so today in environmental areas than before. In terms of the personal areas and in the part of the question that asks about forming the future, they'll not do any kind of better job now than they did. There is very little meaningful choice in American education. There is very little student work within the community. There is very little work even within the student community amongst different age groups. You are put into a class setting where everybody is within one year of one another in age. What can be more unrealistic than that?

AB: You referred to my terms "meeting" and "forming". Perhaps you would like to say something about what you think about, when you hear these two words: "meet" and "form" the future?

AP: Using psychological terms, meeting the future is to react, and forming the future is to proact. School trains kids reasonably well in America to be reactive. If there is a problem, children learn how to analyze the problem. We really engage in constructive action to form solutions to a problem. But we don't have much of a personal investment in the future. The best substantiation I can give to that is the fact that, after this

formal American education, fewer than half of them even bother to register to vote for the first four years after they graduate from high-school. That is not asking people to go and serve God and country and change the world; that's just to go to your Town Hall and put your name in for the polls.

4.

AB: Do you think that the school could do more to make the students well equipped to meet and form the future?
What are some of the steps and measures to be taken that you think of first?

AP: There is a whole lot of things that need to be done. First of all we need to make administrators aware that the future is an important field of educational inquiry. We need to have school administrators think in a futuristic way. Administrative training programs are not future-oriented at all in America at any institution. Secondly: Teacher training programs (which are run by administrators, which is why I put them first) are not future-oriented at all in any way.

When I initially engaged in work in the futures field, I ran teacher training programs at the University of Massachusetts, because I felt that if you can train the teachers, at least they can go out and effect large numbers of students. Now I am more in favor of an administrative approach. I feel that if an administrator supports Future Studies, there are enough teachers out there that can be trained or retrained to back it up.

There are two steps that can be mentioned. The curriculum should be more oriented towards the students' daily life. And the curriculum should be more technologically oriented. What it means is that you have to deal directly with the issues of technology which our societies are dealing with head-on and to which there are no right answers.

AB: You listed various things that you would like to think of as a part of preparedness for the future: communication

ability, having a positive image of oneself, self-esteem etc. Do you feel that all these things can be fostered through school programs, or are there some things that schools could not really do much about?

AP: The things that you just mentioned, schools have a major impact on. Anyone who says that schools do not have a heavy impact on the students' sense of self esteem, the image of the future, the sense of optimism about the future, the sense of empowerment, is not telling the truth or just doesn't know the truth. Schools have now, had in the past and always will have impact in all those areas.

AB: What do you think could be in general the best way to proceed?

AP: Special future courses should be voluntary. There are a lot of different ways to learn about the future, and you don't have to take future courses to do that. You can learn about the future through a well-developed arts curriculum as well as you can through well-developed futures curricula, and I believe that every student that takes future studies should be there because he or she wants to attend and not because someone made them do that.

AB: It was very interesting to listen to your talk about the Montclair school that has the entire curriculum focused on the future. Is that quite unique?

AP: Yes it is, at least in this country. There are over 900 school districts in the U.S. with some form of future studies in them. However, there is no one school, except this one, where the entire curriculum focus is on the future.

AB: What do you feel to be some of the advantages and perhaps some difficulties in this approach - in making the whole school a future-oriented school?

AP: For one thing, you don't have any model to fall back on. In a sense, then, you almost can't fail, but on the other hand you don't know if you succeeded. Secondly, you have got to build the curriculum yourself. As everyone knows, there is so much to consider when it comes to the future.

What is good, what is not good, and what do you include? You have to leave out plenty that could have an impact on the future. This means many difficult choices.

AB: Could you give me some typical example of course content?

AP: One good example is a unit that is mostly for first-graders, called the Earth's Timetable. In the Earth's Timetable there is a theme through all the units, which is change. Kids learn about geological change, what the earth used to look like, how it was formed. They make models of it. They make movies of it. They even try to create some artificial earth structures out of papier maché and wire. Through learning about geological change, they also learn something about change in general.

5.

AB: If you were an upper-secondary school teacher in a subject with which you are particularly familiar, how would you like to make the students more conscious of and prepared for the future?

AP: I was initially a secondary school teacher in social studies. - Well, I would say, whatever subject matter area I was responsible for, I would try to use some of the underlying longtime forces within that subject matter area. Make the students aware of these forces. Speculate about some of the possibilities open in this particular area in the future. I would try to link history and the future, using futuristic techniques. The whole idea of scenario constructions, Delphi polls, cross-impact matrices etc. works very, very well. I have used them at the secondary school level. These techniques can teach us all kinds of things in an interdisciplinary, future-oriented fashion that relates to history.

6.

AB: Is there any new knowledge or finding in your special fields that could be of importance to our preparedness for the future and of which, in your opinion, school should take advantage in one way or the other?

AP: A few observations from my work in the futures field may be mentioned. First of all: The future is not as different as you might think it is. The study of the future is really updated classical, liberal education for the 21st century. It may sound a little different. It may look a little different. But it is really not new and strange. Let's take, for example, the use of Latin. In the late 19th century, all educated people were supposed to know Latin. Why were they supposed to know Latin? They were supposed to know it because the most natural way that scientists, for example, in different countries could communicate with each other, was through Latin. They would know Latin and they could communicate in Latin. Now, with the communications revolution that is not as necessary. What is beginning to become necessary is that scientists from all countries know how to use a computer.

There are other kind of things that I think people can take notice of. I think people who examine the future in a systematic way also get excited about learning other things that are in the present and that look and sound very traditional and very much "business as usual". That is an unexpected spin-off effect. The kids seem to be much happier and more motivated.

7.

AB: School work directed towards the future may work with "probable futures", "possible futures" and "desirable futures". As far as "desirable futures" are concerned, they might bring evaluation problems to the fore that may sometimes seem controversial. How do you look upon the role of school in connection with these three types of visions of the future?

AP: I like probable and possible, and by the way schools do this any way. Future studies is just a way of better defining these. In fact, traditional schools do communicate probable futures to kids. That is one of the reasons why they feel powerless. Schools usually do a poorer job of communicating possible futures. And future possibilities

are to be really stressed. Future probabilities are also to be stressed a little more.

Currently, schools often get desirable futures mixed in with probable futures. Basically, what is communicated to be desirable is "business as usual", status quo. The future would be just the same as today, only perhaps a little more and a little better. Nothing could be further from the truth. There is one future that I know won't happen, and it is this one.

Desirable futures are controversial, and I wouldn't include this initially in a futures program. The main problem is the difficulty of getting agreement. Someone is saying: Make a choice in front of what kind of energy you want: a desirable future. Is a future of slightly cheaper energy that pollutes a lot, more desirable than one that includes energy that costs more but pollutes less? As far as I am concerned, an educator is not an educator if he tries to take a stand on that, unless he offers an energy expert, and even then I can usually bring another energy expert with an opposite point of view.

Sometimes, much depends upon how you formulate the problem. I think the concept of tolerance and appreciation of diversity and similarities of all people is a rather off-beat way of saying: We don't like racial segregation and racial or other kinds of social injustice. It's hard to be against social equality. But if you come out and say: "I think we should have forced integration", it's easy to be against "forced anything". So I think it's how it's put, and if you call something desirable, you better make sure that everybody think it's desirable, because often you think everybody would agree upon a thing being desirable, but a lot of people won't. There are states in the U.S. that forbid by state law the teaching of the theory of evolution in public schools. That remains to this day. To me that is a desirable thing for kids to know, and also essential. But there are states that forbid that.

AB: Would you say that things about which there is no consensus as to whether they are desirable, should not be discussed from that point of view?

AP: From a point of view of being desirable, this would be my position. But you can teach students that much is possible. What's probable: you can teach much there too. In general, I think this is a useful curriculum development schema: the idea of probable futures, possible futures and desirable futures.

AB: You mentioned that discussions on probable futures sometimes lead the students to a feeling of being powerless, and in many discussions about future programs there has been talk about the risk of infusing the students with a feeling that the problems are too big, the world is too dark and so on - a pessimistic attitude that you can't do anything. What do you feel about that? Is that a risk, and how could that be handled?

AP: It is not a risk at all. Our research has shown that the more people are informed, the more empowered they feel and the more they come up with creative solutions of problems that you and I and all the experts in the world never even imagined were possible. Let me just mention a small example. We developed a planning game. Basically we ask people to imagine all the possible ways of getting people and goods from one specific place in Massachusetts to another. And the way people come up with ideas and the criteria which they develop are really fantastic and much more imaginative than the so-called experts' views.

8.

AB: Are there some other things that we didn't touch upon that you think are very important to this field of preparedness for the future that you would like to add?

AP: The only thing that I would wish to add is that there must be more diversity in the field and that goes not only for educational futurism but for futurism in general. The whole field of cross-cultural time-perspectives is a very fertile one. A profound work was

done by a Dutchman, Fred Pollack, called "The Image of the Future". What is plain and simple to someone in Thailand about the future, is not at all plain and simple to someone in Malaysia etc. As long as future studies remain essentially a task for a few Western, developed nations, we will be that much poorer in the field.

AB: Future studies in connection with school has been a fairly rapid development in the USA during recent decades. What would be your forecast for the future of this field? Would it develop quickly, or would it be restricted to a limited group of people?

AP: It is a very fertile field. First of all, it survived the seventies where most educational innovations from the sixties were wiped out. It not only survived, but it grew. Secondly, we have shown how it can integrate itself with the traditional curriculum. We have shown that you don't need a whole lot of special training to do it. It doesn't cost a whole lot of money. It's transportable. Any good teacher can learn how to do it - in a matter of a month.

AB: Are there some risks and difficulties involved? Do you feel that some part of futures studies goes in the wrong direction, from your point of view?

AP: Yes, it's sometimes very deterministic, classist, sexist, racist, culture-imperialist and probable some other things as well. This is something that happens to a lot of academic disciplines, similar to what Thomas Kuhn outlined in his book on scientific revolutions in the early 60s. In a development of a paradigm it is necessary to withdraw from the mainstream and develop your own set of jargon, your own set of theories etc. The mainstream of futurism in America has been proceeding this way. The mainstream of educational futurism has not, however. And Ed Cornish has a philosophical bias in favor of keeping the future field open. He accepts all kinds of ideas about the future in his publications, gives folks a forum to present them.

AB: Just a final question: What would you feel would be some of the important needs for the field?

AP: Most of what I said in my commission report belongs here; including things such as networks of people, ideas and institutions, directory of the same, practitioner journals, places where people can get their ideas on view and, of course, resources.

The only thing I would add would be a greater sense of hope towards the future. Futurists love to read about the future, and much of that literature has focussed on the problems that we face. I do not say that we should not have that literature. But educational futurism in particular and futurism in general need more of a sense of hope.

NOTES ON THE INTERVIEWEE

Mr. Allan L. Peakes
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As Director of Future Studies Mr. Peakes is responsible for conceptualizing, developing, implementing and evaluating the Future Studies Program for the Montclair Public Schools. Mr. Peakes is also Education Editor of the World Future Society and Chair of the Commission on Teaching the Future. He was Founding Editor of "Future Information Interchange" (probably the oldest educational futures journal existant); ran training programs in future studies for teachers and administrators at various U.S. colleges and universities; and ran the Future Studies Graduate Program at the University of Massachusetts at Amherst, Massachusetts.

As further information we quote brief abstracts of two conference papers that Mr. Peakes presented at the Third Annual Conference of the World Future Society - Education Section, Amherst, Mass. (Appendix.)

APPENDIX

ABSTRACTS OF TWO CONFERENCE PAPERS

(presented at "The Next Millennium: Unlearning the Twentieth Century" - The Third Annual Conference of the Education Section of the World Future Society, held at the University of Massachusetts at Amherst, November 1980)

The Commission on Teaching the Future

Allan L. Peakes, Nov. 6, 1980.

The World Future Society's Commission on Teaching the Future will issue its first report which includes such issues as: What are the most appropriate ways and most effective techniques of teaching the future? How are people trained to teach the future? Does the study of the future enhance academic achievement? What is the role of the administrator in the successful implementation of a future studies program? What materials and settings are most appropriate to teach the future?

The Future School

Allan L. Peakes, Nov. 6, 1980.

The creation of the world's first future studies school: the Grove Street School of the Future in Montclair, New Jersey. It is composed of a kindergarten and grades one through five; all building administrators, teachers, and students are members of the school community through their own choosing. Discussion topics include: the goals and objectives of the Future School, the curriculum model, evaluation techniques, future curriculum, materials, and teacher training thrusts. The assumption is that a future educational program needs to be professionally credible, readily understandable by parents and members of the community, easily and inexpensively replicable by other educators, and a whole lot of fun for the students who participate in it.

1.

AB: What do you think of first when you hear the words
"preparedness for the future"?

MW: My response will reflect the fact that I teach a course on the future. My personal opinion is that a preparedness for the future needs to involve the ability to change ways of behaving on a rational basis, based on information about the probability of a coming event. In this country, I think it is going to involve the rethinking of values, such as the value of waste versus the value of thrift. My experience of teaching a course in this area is that when you expose people to a good deal of information, presenting two sides of a question, they move rather quickly to a cognitive understanding of the need for change. That doesn't make change of habits necessarily easy, but then I apply a behavioral management approach and get them to try out new habits and that works rather well.

AB: Could you tell me something more about what your behavioral management approach would include?

MW: Every student in the class has to undergo one or two projects to change a habit, such as a shopping habit, an energy conversation habit, a nutritional habit or something of that sort. We use various behavioral techniques. They do some charting to see if their behaviors increase, they give themselves points, they learn to get themselves a prize, or even give themselves money for changing a habit. I think it's important in a course like this that everybody experiences going through a change. We need to practice changing things. It works quite well. I have followed up on a few students, and some of the changes have lasted.

AB: In developing this kind of "preparedness for the future" you then start from some basic knowledge?

MW: Yes, I first give a knowledge base. The students are required to read fairly broadly and deeply in seven or eight different areas: energy, food, transportation, etc. First, they get the information, because I think that is very important. Second, they then have to come to a decision on their own as to what behaviors they could change themselves now, that would prepare them for what they are predicting is going to happen. They have to make a prediction. Then they have to link that to changing their own behavior. Then we have them change behavior.

AB: In some of my questions I have the double expression of "meeting" and "forming" the future. What is your reaction to these two approaches to the future?

MW: In both cases I would emphasize the concept of control. I think one way to reduce the anxiety, which I think is very high in this country, is for people to feel that they do have some control over their future. One way to control your future is to make predictions about it, and then to change your behavior in a way that is consistent with what you predict is going to happen. You end up saying: "Well, you see, I have taken two steps, and I am in control of my own future." My experience is that people find it a very rewarding thing to do. This means in a way that they can take the future into their own hands. They are not, as I think most people feel, at the mercy of events they can't control.

AB: Could you say something more about the best ways of giving the students this feeling of control?

MW: I think you have to start to make predictions which force you to look at the future. For example: In ten years, will I be able to drive my car into New York City? If you read enough about it, you will say: "Probably not!" Then, what will I have to do? Well, I'll have to learn to use mass transportation or

change my way of living, and then you get your students to actually try out that new behavior. The theory is that having thought about the future and then being able to change a relevant habit, you are not so afraid of the future.

2.

AB: If you think back on your own school days, did school then, in your opinion, make you and your schoolmates well equipped to meet and form the future?

MW: In my personal education: Yes, I think so. The reason I think so is that first of all I was taught to look for a knowledge base. That is very important. I think I was trained in acquiring good skills: seeking a rational approach to the solution of problems, and knowing where to get information, if I needed it. Probably the most important thing was that we got some sense of history, which I find almost totally lacking today. With a sense of history you are not afraid of the future.

AB: Where did you go to school?

MW: To private schools here in the States.

AB: You said: "In my personal education." Would that mean that you think that other schools of that time might not have been as good in these respects?

MW: I was very fortunate in having a very high quality of education, very dedicated teachers. I don't think that happened to everybody.

3.

AB: Do you believe that school in the U.S., as you know it today, gives the students a good preparedness to meet and form the future?

MW: My opinion is based on doing lots of research in schools over the years, in public schools in the States primarily and in the Eastern half of the USA, and my answer to that would be: "No, I do not."

AB: What specific lacks do you see?

MW: A lack of substantive knowledge. Almost no historical time-sense (which I think is partly attributable to television). I think that kids' time-sense today, in the States at least, is so immediate and so short. They have no sense of anything that happened before. I don't think that they have very good skills in searching out information they need to solve problems rationally.

In addition, school often is a model of how not to be prepared for the future as I perceive it. By that I mean - schools are models of waste for the most part. There is terrible waste of energy, a terrible waste in transportation in bussing kids; and the waste of food in our cafeterias which we have documented is unbelievable. I think you could feed a good part of the third world on the food we waste. And there is waste in school materials and so on. In short, if you look at the school as an environment in which one is going to train children for the future, I would say most of them are not doing that. They are training our children for waste.

4.

AB: Do you think that the school could do more to make the students well equipped to meet and form the future? What are some of the steps and measures to be taken that you think of first?

MW: Absolutely. I think schools could be more of this model of training for the future. They could institute all kinds of conservation measures. They could have a garden and grow some of their food. Teachers and children both could be rewarded in terms of recognition for conservation methods. I think this could be done very easily. I think kids would react very positively. This has been done to some extent and in a few places, but the schools could more deliberately set out to be models of how we may have to live in the next 20

years. In this process, children would also learn a lot more practical skills than they do now.

AB: Do you think of specific measures for different age levels in school?

MW: As the kids get older, I think they should be able to do a lot of the maintenance in school themselves. I know there are all kinds of union problems, but I am speaking of what could be done. By the time the youngsters get to high school, they should have picked up some very practical skills, being able to do painting, repair work, etc. This would also cut down on the terrible price schools are paying for damage at schools. I am mainly now thinking of the high school level.

AB: Would you consider it important to make the students more involved, more willing to take part in decisions etc.?

MW: Yes, that's part of my model. This is a highly cooperative model, because I think that's what we are going to need in the future. The competitive model simply is not going to work well in a world with shrinking resources, not for survival. We have to develop all kinds of sharing and cooperative behaviors that are almost nonexistent in schools today. A simple example is the case of one student helping another. Now it is often called cheating. I think there should be opportunities for kids to help each other in school with school work. That should be a desirable behavior, not an undesirable behavior. Now our classes are mostly run on this basis: you compete with this one, and you mustn't help each other. I think that is a very inappropriate training.

AB: Do you see the marking system as a problem in this connection?

MW: Yes, that's tricky. It's hard to resolve it, but I think you can to some extent assign grades to groups. I would not like to do away with evaluation in school altogether, however.

5.

AB: If you were an upper-secondary school teacher in a subject with which you are particularly familiar, how would you like to make the students more conscious of and prepared for the future, within that subject area?

MW: My area would then probably be psychology, and that would be fun to do. I would use the existing knowledge we have about what makes students behave the way they do. My bias would be towards reinforcement theory and social learning theory. I think I would get kids to project into the future - what kind of life they are going to have and the problems they will have to meet in 25 years, when they are grown up. Then I would lead them to understand how their behavior might have to be different in order to live in that world.

And I would get the youngsters to think about the kinds of behavior they needed. I'd try to get them to think about how laws could be written that would be helpful. I would get them to design programs for how to encourage people to take on new behaviors. We would talk about the psychology of future behaviors. Kids like that kind of stuff.

6.

AB: Is there any new knowledge or finding in your special fields that could be of importance to our preparedness for the future and of which, in your opinion, school should take advantage in one way or the other?

MW: I don't know how new it is, but I think schools that I know are not using reinforcement theory. It's so easy to set up programs for rewarding the behaviors that you want to have happen. Schools tend instead to work on a very punitive basis. They tend to look at behaviors they don't want to have appear and write rules against them and set up punishment against them.

AB: Would you give some examples of the type of reinforcement that you have in mind?

MW: There are several simple things. For example, in an elementary school where kids stay in one room, I would have a meaningful prize that pupils would help to select. This would be for the people who kept the best maintained room for the week or a month or something similar, just to start the idea that we need to take care of our materials and our resources.

I would start with simple things like that. Another example might be rewarding students for taking only the food you can eat in the cafeteria, etc. Further, I would turn the class into a living laboratory of energy-saving, have a competition, offer some prizes.

7.

AB: School work directed towards the future may work with "probable futures", "possible futures" and "desirable futures". The latter ones bring evaluation problems to the fore that may be controversial. How do you look upon the role of school in connection with these three types of visions of the future?

MW: I feel that the evidence is overwhelmingly convincing that we will be living in a world with limited resources. If I were superintendent, I would start with the information that I have, and say that that seems to be the best prediction anyone can make. This would be a "probable future".

I would also start with the assumption that if anyone has limited resources, we are going to need to share them. That means getting around to the area of "desirable futures". I wouldn't preach cooperation. I'd simply say: "Given that we are going to have limited resources, we are going to need to find ways to share them." Then, what kinds of behavior will we need?

AB: My question also included "possible futures". Would that have a place in your program?

MW: If you are talking about a real alternative to a planet with limited resources, I don't see it.

AB: But you might think of various alternatives in handling the problems we will face?

MW: Sure, we would consider all kinds of ways of attacking the problem, from a national way of dealing with the problems to a very local level of solving them.

AB: You seem to emphasize the picture of the future where the main big problem is limited resources?

MW: Yes, I think that's becoming a major fact of life right now.

AB: A related aspect might be the question of pessimism versus optimism as to the future. Some people say when we talk about the future in schools, that children might risk being overwhelmed by the difficulties, that they feel less inclined to act, and say: "This is hopeless." How do you feel about that?

MW: The idea of living with limited resources can be a very optimistic notion. I would be very strong in modelling the cooperative aspect of life.

In this country we have a very large "alternative press". Some of the magazines that are dedicated to alternative life-styles have a circulation of 600,000, which is quite substantial. I read these magazines all the time for my course, so that I feel that I am in touch with the thinking of people who are interested in different life-styles. Many people in the north-east - intelligent, well-educated people - have chosen an alternative life for themselves. They are not living with a great deal of money, but they are living what they feel is a very good, wholesome life. I would take the kids out to let them see how these people live.

AB: Would you call yourself an optimistic person?

MW: Absolutely an optimist.

AB: In spite of the fact that you emphasize the perspective of shrinking resources?

MW: I don't see that as a bad thing. I think it's a very good thing. I think that sometimes people are at their very best when they have to face limitations of things and have to deal with them. One problem we have in

this country is rather a superabundance of material wealth.

AB: In writing essays on the future, children often give pessimistic views, writing about wars and the possibility of ultimate destruction. This might be more difficult to deal with than the problem of limited resources. The students feel very helpless in this perspective.

MW: Well, we all are. We have to face the fact that some idiot can push a button some day. But I can't see that you can build your life around it. Let's put our energy where we can make a difference. The holocaust is a possibility; I know it is. But that wouldn't keep me from pushing ahead in the area where I can do something. In teaching kids or adults, I tend to keep the focus on what you can do.

8.

AB: Is there anything else that you would like to add to our discussion on the school and the future?

MW: Speaking for this country, I don't see any incentives anywhere, or hardly anywhere, for people to be concerned about the future. For example, there is absolutely no reward for me as a school superintendent to be concerned for the questions you have put here. I am rewarded for dealing with today's budget and maybe next year's budget. Nobody is ever saying to me: "We want you to spend a little bit of your time thinking about the future."

I think this is true in almost all institutions I can think of - that there are no such incentives. For example, the government, even the regular administration, could offer small monetary rewards (of \$ 500 or something like that) to individuals who send in ideas of importance for the future, for example about how to save energy. I don't think we have found a way to turn on the energies and capabilities of individual people in action, and I think that's too bad, because

I think people are interested in the future.

Television might be one way of approaching this task. You need to have models or pictures of what people can do. The message should be: Do it yourself. The government tends to turn to, for every small problem, a huge solution. I think instead we need a lot of small solutions to big problems.

AB: Could you give me some written material on your own course on the future?

MW: I change it all the time, but I might give you some outline information. (Cf. appendix.) We have reading lists of books that I am sure you are familiar with. But we also work a lot with newspapers. I try to train the students to follow the current debate.

AB: What kind of students attend this course?

MW: All kinds of students, but mostly teachers, people who are here to earn a master's degree. You probably get a higher than average proportion of alternative life-style people. You have to be careful that it does not turn into a course where you just sit and exchange ignorances or play games. Teaching about the future does not have a very scholarly ring to it. But that is something we in education should change. The future should be taken seriously.

AB: When you have teachers as students, do they develop some teaching materials for their own subject areas in connection with your course?

MW: Some have done that, but these tasks have not been so popular or successful. I feel we have been more successful with the tasks I mentioned before, involving changing behaviors.

AB: You told me that you are a persistent reader of various magazines within the alternative press. Could you mention some such magazine that might be a good source of information about new books, curricula etc.?

MW: A good source would be RAIN, a magazine published in the state of Washington. It contains reviews of many kinds of useful materials.

APPENDIX

COURSE TP 4019; Mary Alice White
OBJECTIVES AND READINGS (Spring 1981)

Schooling for the Future emphasizes four educational approaches to the future: (1) acquiring a realistic information base, (2) acquiring cognitive control, (3) practice in attitude change, (4) practice in behavioral change. The student is exposed to all of these four approaches through readings and projects. The goal of the course is to provide students with educational tools for dealing with the future.

The students in this course will read sources selected to provide an information base on these selected topics: the future of resources; alternatives and predictions; the land and civilization; food in the future; media in the future; visions and views. Readings are accompanied by Guideline Questions which direct the student to pertinent passages. The guidelines questions are to be answered in class. This procedure has been selected as the most likely, based on the psychological evidence to date, to ensure that we store the same information base.

The skill of cognitive control includes practice in making predictions about the future - from an information base. It is an anticipatory skill, on the premise that those who can anticipate the future are more likely to be prepared to meet it. This cognitive control skill will be practiced in each of the two projects where predictions will be made by the student.

In addition to lectures and films, the students will carry out two projects, one in attitude changes and the other in behavioral changes. The purpose of these two projects is to give students practice in changing attitudes and behavior, based in information about the future, on the assumption that the ability to change one's attitude and behavior will be crucial to dealing with future events.

TOPIC A. Resources in the Future

1. Meadows, D.H. et al. The Limits to Growth. Washington, D.C.: Potomac Associates, 1972. (Paper) \$ 2.75
2. Stobaugh, R. & Yergin, D. (Eds.) Energy Future: Report of the Energy Progress at the Harvard Business School. New York: Ballantine, 1979. (Paper) \$ 2.95

TOPIC B. Alternatives and Predictions

3. Schumacher, E.F. Small is Beautiful. Harper, 1973.
(Paper) \$ 2.95
4. Ehrlich, P.H. & Ehrlich, A.H. The End of Affluence.
Ballantine, 1974. (Paper) \$ 1.95

TOPIC C. The Land and Civilization

5. Hyams, E. Soil and Civilization. Harper, 1976. (Paper)
\$ 3.95
6. Barry, W. The Unsettling of America. Avon, 1978. (Paper)
\$ 4.95

TOPIC D. Food, Hunger, Politics

7. Lappé, F.M. Diet for a Small Planet. Ballantine, 1971.
(Paper) \$ 1.25
8. Lappé, F.M. & Collins, J. Food First. Ballantine, 1978.
(Paper) \$ 2.75
9. Lappé, Collins & Kinley. Aid as Obstacle. San Francisco:
Institute for Food & Development Policy, 1980. (Paper)
\$ 4.95
10. Gussow, J. (Ed.) The Feeding Web. Bull, 1978. (Paper)
\$ 9.95 (selections)

TOPIC E. Media and Your Future

11. Mander, J. Four Arguments for the Elimination of
Television. Morrow, 1978. (Paper) \$ 4.95
12. Mankiewicz & Swerdlow. Remote Control. Ballantine,
1978. (Paper) \$ 2.75

TOPIC F. Visions and Views of the Future

13. Courier, K. (Ed.) Life After '80. Andover, Mass.:
Birch House Publ. 1980. (Paper) \$ 6.95 (selections)
14. White, N.A. The Land of the Possible. Warner Books,
1979. (Paper) \$ 2.25
15. Toffler, A. The Futurists. Random House, 1972. (Paper)
\$ 4.95 (selections)
16. Ward, B. The Home of Man. Norton, 1976. (Paper)
\$ 3.25 (selections)

NOTES ON THE INTERVIEWEE

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Professional activities:

An editor and a founder of "Journal of School Psychology",
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Sample publications:

A study of schizophrenic language. Journal of Abnormal
and Social Psychology, 1949, 44, 61-74.

The School Psychologist. New York: Harper, 1961. (x)

Education: A Conceptual and Empirical Approach. New
York: Holt, 1973. (x)

Models of schooling and models of evaluation. Teachers
College Record, 1973, 74, 293-307.

A school for planetary citizens. Not Man Apart, 1975,
5 (23), 4-5.

Natural rates of teacher approval and disapproval in
the classroom. Journal of Applied Behavior
Analysis, 1975, 8, 367-372.

Sex bias on children's television programs. The Journal
of Psychology, 1977, 96, 197-204. (x)

The Land of the Possible. New York: Warner Books, 1979.

Evaluating curriculum fit with class ability. Journal
of Educational Psychology, 1980, 72, 338-344. (x)

(x) = with multiple authorship